

**Purpose** The MOS-SS was created as part of a larger initiative to evaluate health status in a population of more than 10,000 patient participants. Consisting of 12 items, the sleep scale is only a small part of the complete Patient Assessment Questionnaire (PAQ), a 20-page instrument querying a broad range of health-related issues including physical functioning, psychological well-being, health distress, and pain. The sleep scale examines six factors: sleep initiation, maintenance, respiratory problems, quantity, perceived adequacy, and somnolence. The MOS-SS can be administered separately, or it can be used as part of a complete battery of testing to provide a more general picture of health.

**Population for Testing** The questionnaire was initially validated in a baseline sample of more than 3,000 individuals. Participants ranged in age from 18 to 98 years, with a mean age of 54.

**Administration** The scale itself is quite short, requiring approximately 5 min for administration. However, the complete PAQ is much longer and more time-consuming. Both are self-report, pencil-and-paper measures.

**Reliability and Validity** In a baseline psychometric evaluation of the scale [1], MOS developers found an internal consistency ranging from .75 to .86. Measures of sleep disturbance, quantity, and optimal sleep were found to be highly related to perceptions of adequacy.

**Obtaining a Copy** A copy of the scale can be found in a chapter regarding sleep measures written by Hays and Stewart [1]. The complete PAQ can be found in the book's Appendix [2].

**Scoring** The scale uses predominantly Likert-type questions to evaluate sleep. Scales range from 1 (meaning "all of the time") to 6 ("none of the time"), and require respondents to indicate how frequently during the previous 4 weeks they have experienced certain sleep-related issues. Several of these items are reverse scored. Another Likert-type item queries sleep latency (1="0–15 min" and 5="more than 60 min"). Finally, a fill-in-the-blank question asks participants to estimate the average number of hours they have slept each night in the past month – a response of 8 h or greater receives a 1, while answers below 8 h receive 0.

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## Sleep Scale from the Medical Outcomes Study

1. How long did it usually take for you to fall asleep during the past 4 weeks?

(Circle One)

- 0-15 minutes.....1
  - 16-30 minutes.....2
  - 31-45 minutes.....3
  - 46-60 minutes.....4
  - More than 60 minutes .....5
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2. On the average, how many hours did you sleep each night during the past 4 weeks?

Write in number

of hours per night:

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**How often during the past 4 weeks did you...**

(Circle One Number On Each Line)

	All of the Time ▼	Most of the Time ▼	A Good Bit of the Time ▼	Some of the Time ▼	A Little of the Time ▼	None of the Time ▼
3. feel that your sleep was not quiet (moving restlessly, feeling tense, speaking, etc., while sleeping)?	1	2	3	4	5	6
4. get enough sleep to feel rested upon waking in the morning?	1	2	3	4	5	6
5. awaken short of breath or with a headache?	1	2	3	4	5	6
6. feel drowsy or sleepy during the day?	1	2	3	4	5	6
7. have trouble falling asleep?	1	2	3	4	5	6
8. awaken during your sleep time and have trouble falling asleep again?	1	2	3	4	5	6
9. have trouble staying awake during the day?	1	2	3	4	5	6
10. snore during your sleep?	1	2	3	4	5	6
11. take naps (5 minutes or longer) during the day?	1	2	3	4	5	6
12. get the amount of sleep you needed?	1	2	3	4	5	6

Hays and Stewart [1]. Copyright, 1986, RAND.

## References

1. Hays, R. D., & Stewart, A. L. (1992). Sleep measures. In A. L. Stewart & J. E. Ware (Eds.), *Measuring functioning and well-being* (235–259). Durham: Duke University Press.
  2. Stewart, A. L., & Ware, J. E. (1992). *Measuring functioning and well-being*. Durham: Duke University Press.
- Zelman, D. C., Brandenburg, N. A., & Gore, M. (2006). Sleep impairments in patients with painful diabetic peripheral neuropathy. *The Clinical Journal of Pain*, 22(8), 681–685.
- Katz, D. A., & McHorney, C. A. (1998). Clinical correlates of insomnia in patients with chronic illness. *Archives of Internal Medicine*, 158(10), 1099–1107.

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## Representative Studies Using Scale

- Haut, S. R., Katz, M., Masur, J., & Lipton, R. B. (2009). Seizures in the elderly: impact on mental status, mood, and sleep. *Epilepsy and Behavior*, 14(3), 540–544.